Test Report issued under the responsibility of:

TÜVRheinland®

TEST REPORT
IEC 62368-1
Audio/video, information and communication technology equipment
Part 1: Safety requirements

Report Number ..... :	**50283314 001**
Date of issue ..... :	2020-05-18
Total number of pages ..... :	145 (excluding attachments, refer to page 3)
Applicant's name..... :	**TDK-Lambda (China) Electronics Co., Ltd.**
Address ..... :	No. 95, Zhujiang Road, Xinwu District, Wuxi 214028 Jiangsu, P.R. China
Test specification:	
Standard ..... :	IEC 62368-1:2014 (Second Edition)
Test procedure ..... :	CB Scheme
Non-standard test method..... :	N/A
Test Report Form No..... :	IEC62368_1B
Test Report Form(s) Originator .. :	UL(US)
Master TRF ..... :	2014-03

This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

General disclaimer:

The test results presented in this report relate only to the object tested.
This report shall not be reproduced, except in full, without the written approval of the Issuing CB Testing Laboratory. The authenticity of this Test Report and its contents can be verified by contacting the NCB, responsible for this Test Report.

Test Item description ..... :	Switching Power Supply
Trade Mark ..... :	TDK·Lambda
Manufacturer ..... :	Same as applicant
Model/Type reference ..... :	CUS200M-zxxxxxxx; CME200A-zxxxxxxx; CUS150M1-zxxxxxxx; CME150A-zxxxxxxx (z = 12, 18, 24, 36 or 48; xxxxxxx = T, M, MR, R, J, JR, L, A, CO2, S1, other alphanumeric character, symbol or blank) Refer to page 18 for definition of variables
Ratings ..... :	See the model list on page 17 for details

Testing procedure and testing location:			
☒	CB Testing Laboratory:	TÜV Rheinland Shanghai Co., Ltd.	
Testing location/ address .....:		No.177, 178, Lane 777 West Guangzhong Road, Jing'an District, Shanghai, China	
☐	Associated CB Testing Laboratory:		
Testing location/ address .....:			
Tested by (name + signature) .....:		Tim Song / Technical Expert	
Approved by (name + signature) .....:		Sunny Sun / Technical Reviewer	
☐	Testing procedure: TMP/CTF Stage 1		
Testing location/ address .....:			
Tested by (name + signature) .....:			
Approved by (name + signature) .....:			
☐	Testing procedure: WMT/CTF Stage 2		
Testing location/ address .....:			
Tested by (name + signature) .....:			
Witnessed by (name + signature).....:			
Approved by (name + signature) .....:			
☐	Testing procedure: SMT/CTF Stage 3 or 4		
Testing location/ address .....:			
Tested by (name + signature) .....:			
Approved by (name + signature) .....:			
Supervised by (name + signature) .....:			

List of Attachments (including a total number of pages in each attachment):

- ATTACHMENT – Measurement Section (16 pages)
- ATTACHMENT – National Differences (35 pages)
- ATTACHMENT – Photo documentation (8 pages)

Note: Total number of pages in each attachment is indicated in individual attachment.

Summary of testing:

Tests performed (name of test and test clause):

This report is based on original CB report 50138130 001 with certificate ref. no. JPTUV-090121 with following changes:

1. Change Applicant and Manufacturer from TDK-Lambda Corp. Nagaoka Technical Center to TDK-Lambda (China) Electronics Co., Ltd.
2. Add additional new factory TDK-Lambda (China) Electronics Co., Ltd.
3. Remove construction A models.
4. Update test standard from IEC 60950-1 to IEC 62368-1.

All applicable tests as described in Test Case and Tables were performed.

The maximum specified operation ambient temperature is 70°C. Specified ambient temperature for operation is according to manufacturer's specification. (see chart of convection cooling and force air cooling on following)

The load conditions used during testing: Maximum normal load according to clause B.2.5 for this equipment is the operation with the maximum specified DC-load with maximum power condition according to the manufacturer specified.

The equipment is operated up to 5000m above sea level as declared by manufacturer. Clearances have been evaluated according to IEC 60664-1 table A.2 with a multiplication factor of 1.48 throughout this report.

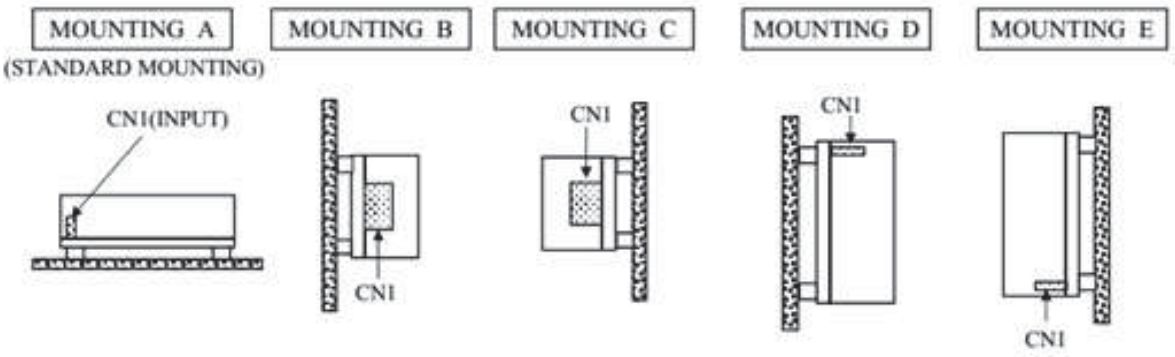
The test samples are pre-production without serial numbers.

Testing location:

TÜV Rheinland Shanghai Co. Ltd.

No.177, 178, Lane 777 West Guangzhong Road, Jing'an District, Shanghai, China

Mounting position:



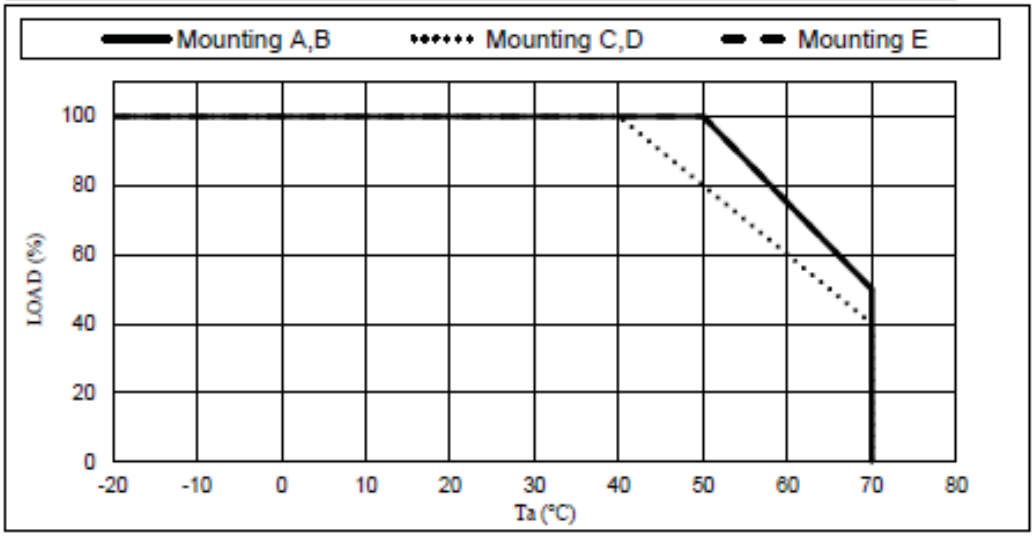
Derating Curve:

OUTPUT DERATING VERSUS OPERATING AMBIENT TEMPERATURE (Ta)

*COOLING : CONVECTION COOLING

MODEL: CUS200M-18, CUS200M-24,CUS200M-36, CUS200M-48

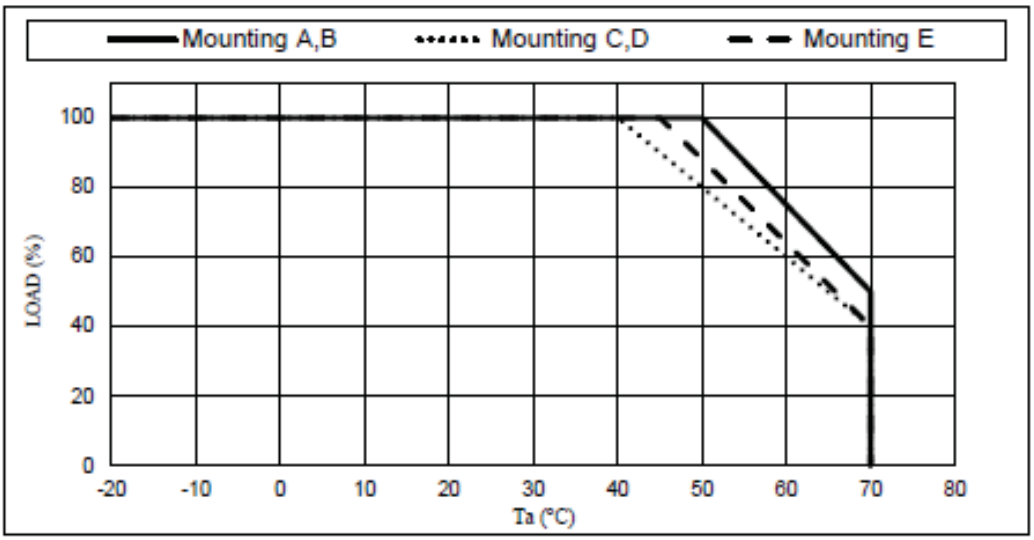
Ta (°C)	MOUNTING A,B	MOUNTING C,D	MOUNTING E
	LOAD (%)	LOAD (%)	LOAD (%)
-20 - +40	100	100	100
50	100	80	100
60	75	60	75
65	63	50	63
70	50	40	50



*COOLING : CONVECTION COOLING

MODEL: CUS200M-12

Ta (°C)	MOUNTING A,B	MOUNTING C,D	MOUNTING E
	LOAD (%)	LOAD (%)	LOAD (%)
-20 - +40	100	100	100
45	100	90	100
50	100	80	88
60	75	60	64
65	63	50	52
70	50	40	40

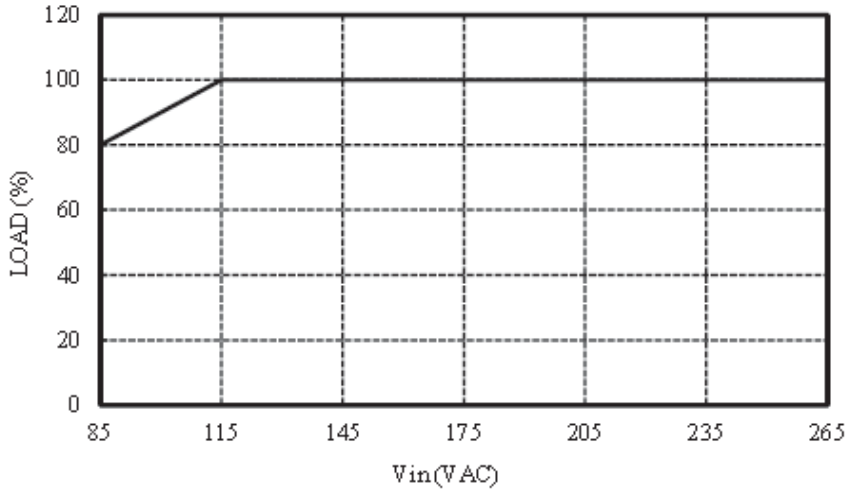


For Model CUS200M

OUTPUT DERATING VERSUS INPUT VOLTAGE

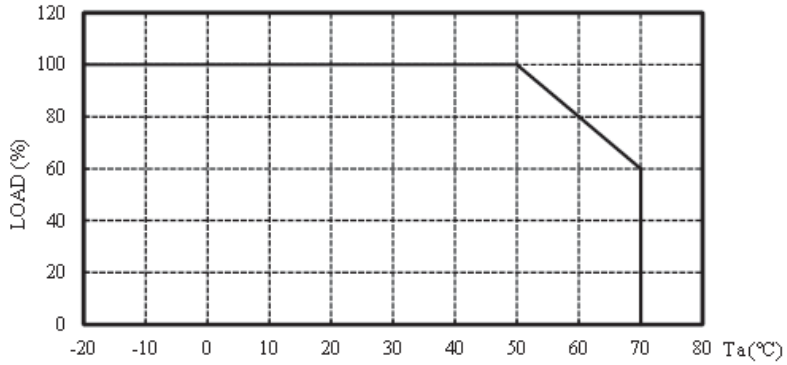
*COOLING : CONVECTION COOLING
FOR ALL MOUNTINGS AND ALL MODELS

INPUT VOLTAGE (VAC)	LOAD (%)
85	80
115~265	100



OUTPUT DERATING VERSUS OPERATING AMBIENT TEMPERATURE (Ta)

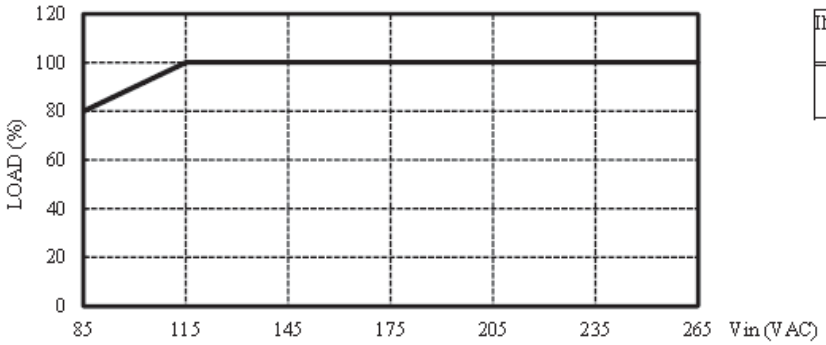
*COOLING: FORCED AIR COOLING
FOR ALL MOUNTINGS AND ALL MODELS



Ta(℃)	LOAD (%)
-20 - +50	100
60	80
70	60

OUTPUT DERATING VERSUS INPUT VOLTAGE

*COOLING: FORCED AIR COOLING
FOR ALL MOUNTINGS AND ALL MODELS



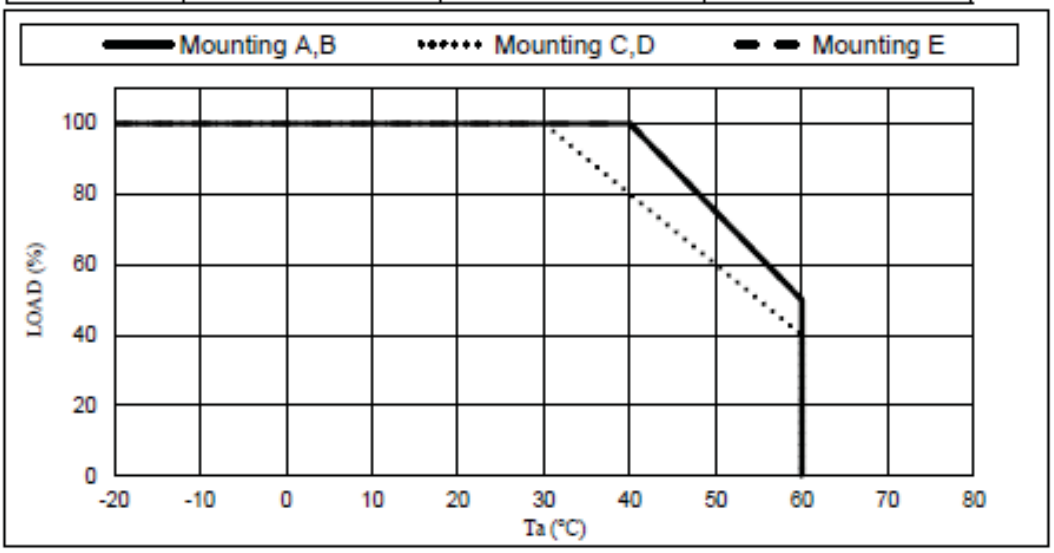
INPUT VOLTAGE (VAC)	LOAD (%)
85	80
115~265	100

OUTPUT DERATING VERSUS OPERATING AMBIENT TEMPERATURE (Ta)

*COOLING : CONVECTION COOLING

MODEL: CUS200M-18/A, CUS200M-24/A, CUS200M-36/A, CUS200M-48/A

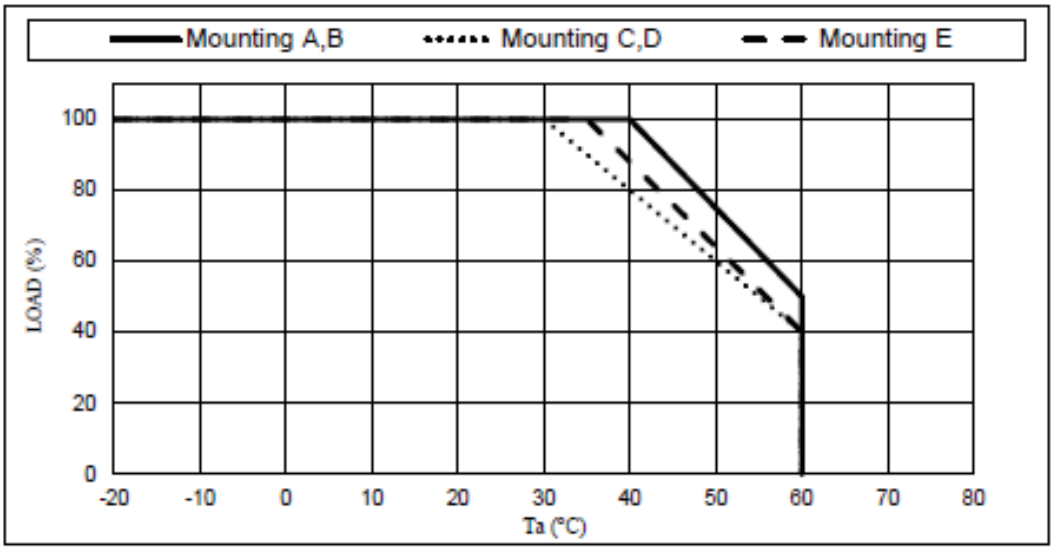
Ta (°C)	MOUNTING A,B	MOUNTING C,D	MOUNTING E
	LOAD (%)	LOAD (%)	LOAD (%)
-20 - +30	100	100	100
40	100	80	100
50	75	60	75
55	63	50	63
60	50	40	50



*COOLING : CONVECTION COOLING

MODEL: CUS200M-12/A

Ta (°C)	MOUNTING A,B	MOUNTING C,D	MOUNTING E
	LOAD (%)	LOAD (%)	LOAD (%)
-20 - +30	100	100	100
35	100	90	100
40	100	80	88
50	75	60	64
55	63	50	52
60	50	40	40

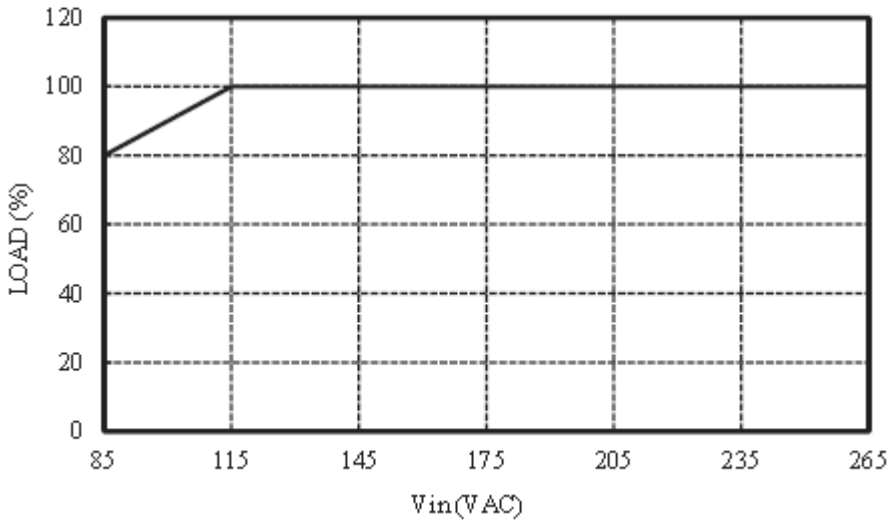


For Model CUS200M-A

OUTPUT DERATING VERSUS INPUT VOLTAGE

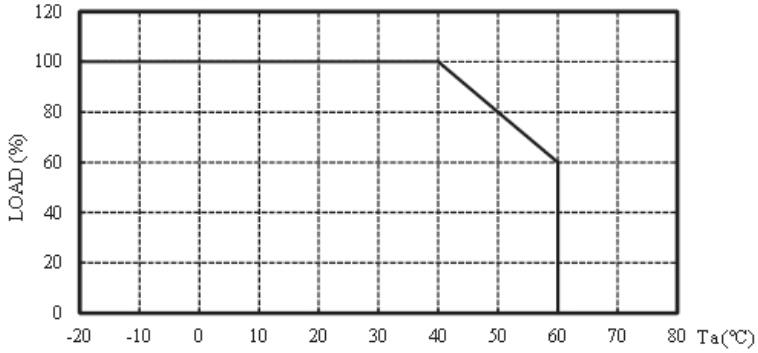
*COOLING : CONVECTION COOLING
FOR ALL MOUNTINGS AND ALL MODELS

INPUT VOLTAGE (VAC)	LOAD (%)
85	80
115~265	100



OUTPUT DERATING VERSUS OPERATING AMBIENT TEMPERATURE (Ta)

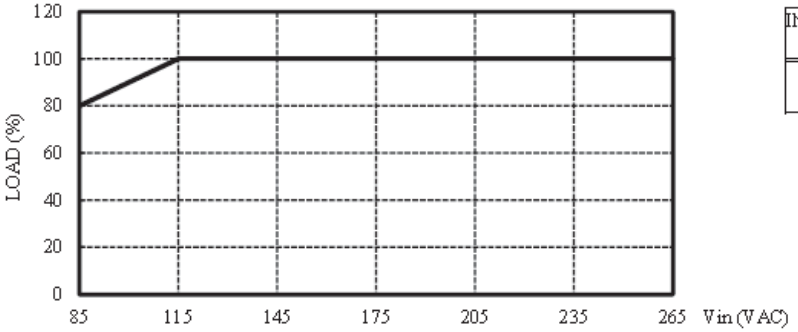
*COOLING: FORCED AIR COOLING
FOR ALL MOUNTINGS AND ALL MODELS



Ta(°C)	LOAD (%)
-20 - +40	100
50	80
60	60

OUTPUT DERATING VERSUS INPUT VOLTAGE

*COOLING: FORCED AIR COOLING
FOR ALL MOUNTINGS AND ALL MODELS



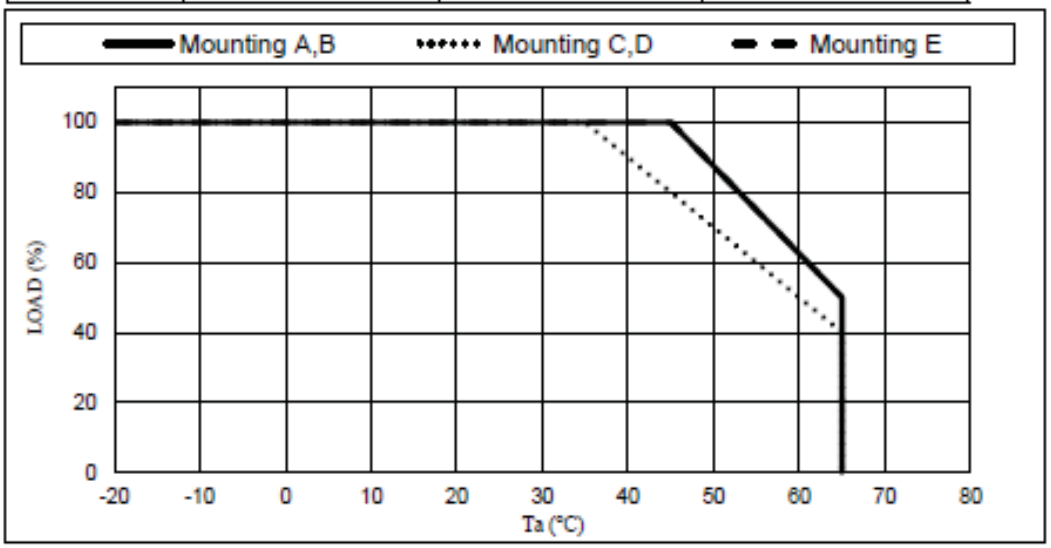
INPUT VOLTAGE (VAC)	LOAD (%)
85	80
115~265	100

OUTPUT DERATING VERSUS OPERATING AMBIENT TEMPERATURE (Ta)

*COOLING : CONVECTION COOLING

MODEL: CUS200M-18/L, CUS200M-24/L, CUS200M-36/L, CUS200M-48/L

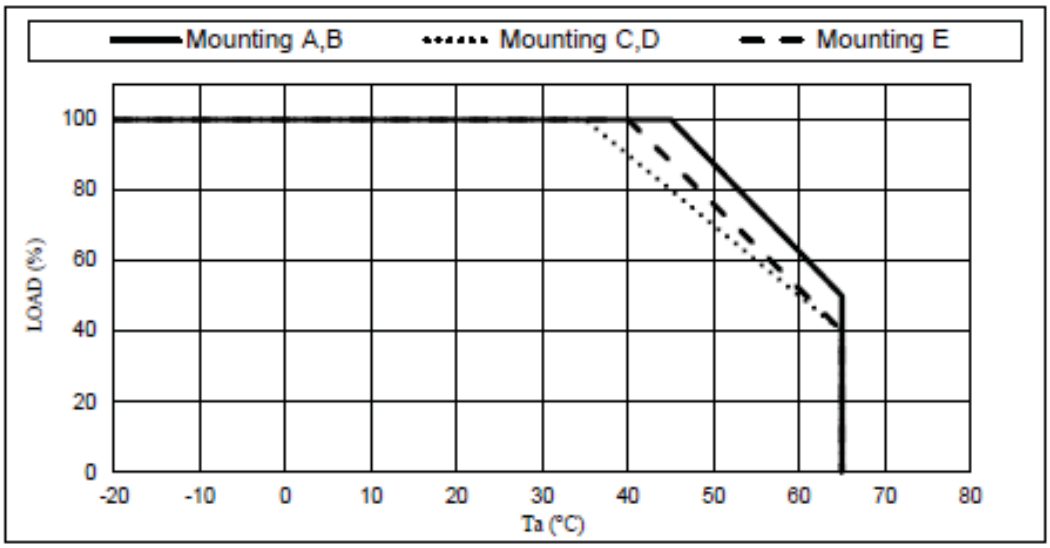
Ta (°C)	MOUNTING A,B	MOUNTING C,D	MOUNTING E
	LOAD (%)	LOAD (%)	LOAD (%)
-20 - +35	100	100	100
45	100	80	100
55	75	60	75
60	63	50	63
65	50	40	50



*COOLING : CONVECTION COOLING

MODEL: CUS200M-12/L

Ta (°C)	MOUNTING A,B	MOUNTING C,D	MOUNTING E
	LOAD (%)	LOAD (%)	LOAD (%)
-20 - +35	100	100	100
40	100	90	100
45	100	80	88
55	75	60	64
60	63	50	52
65	50	40	40

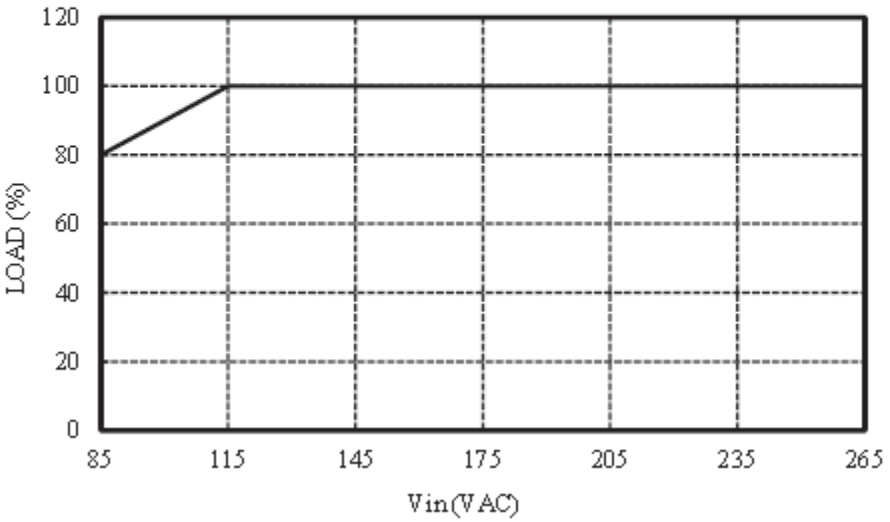


For Model CUS200M-L

OUTPUT DERATING VERSUS INPUT VOLTAGE

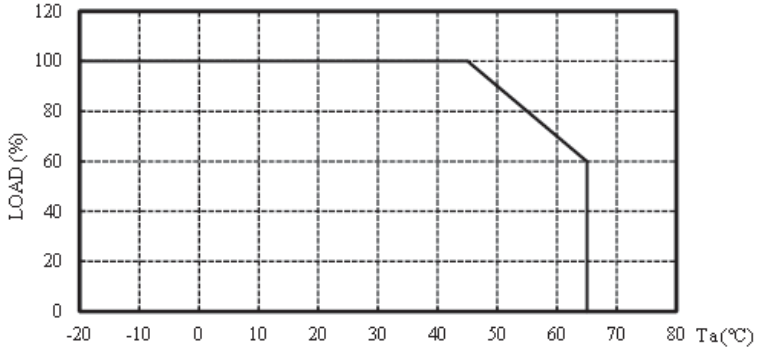
*COOLING : CONVECTION COOLING
FOR ALL MOUNTINGS AND ALL MODELS

INPUT VOLTAGE (VAC)	LOAD (%)
85	80
115~265	100



OUTPUT DERATING VERSUS OPERATING AMBIENT TEMPERATURE (Ta)

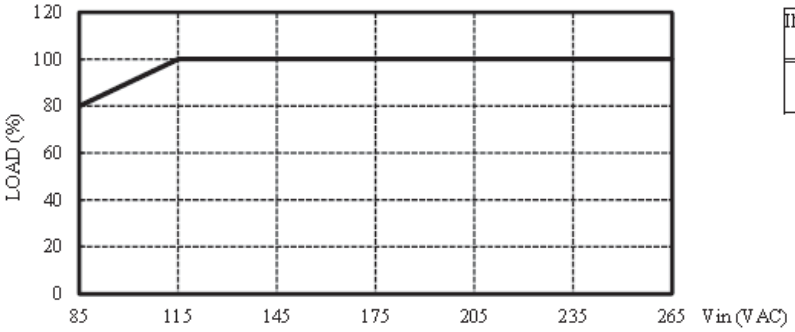
*COOLING: FORCED AIR COOLING
FOR ALL MOUNTINGS AND ALL MODELS



Ta(℃)	LOAD (%)
-20 - +45	100
55	80
65	60

OUTPUT DERATING VERSUS INPUT VOLTAGE

*COOLING: FORCED AIR COOLING
FOR ALL MOUNTINGS AND ALL MODELS



INPUT VOLTAGE (VAC)	LOAD (%)
85	80
115~265	100

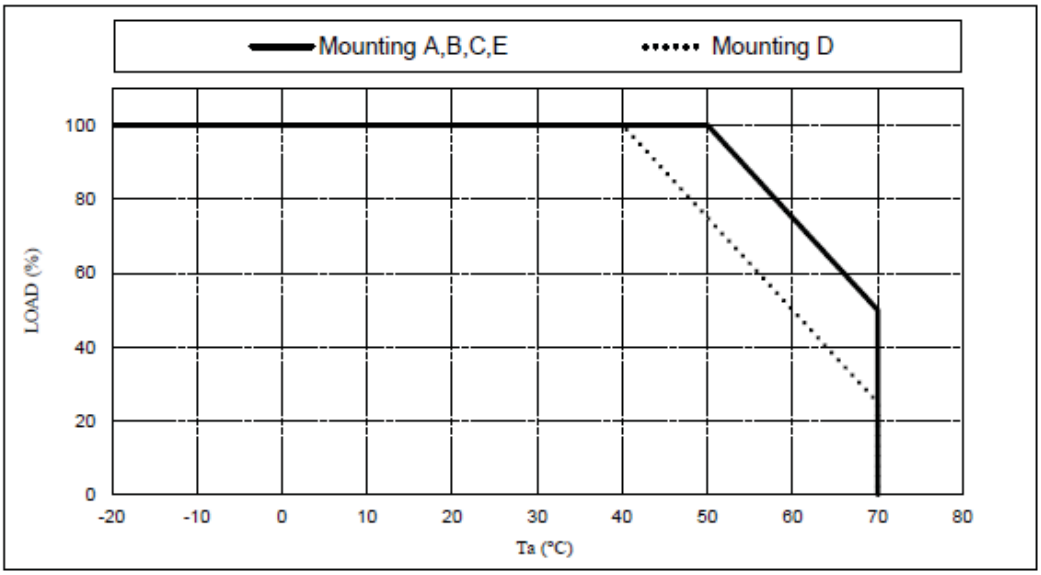
For Model CUS150M1

OUTPUT DERATING VERSUS OPERATING AMBIENT TEMPERATURE (Ta)

*COOLING : CONVECTION COOLING

FOR ALL MODELS

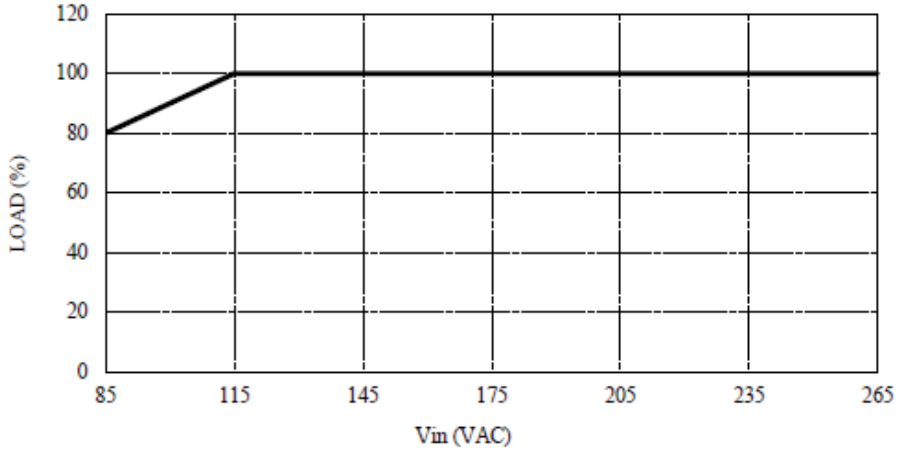
Ta (°C)	MOUNTING A,B,C,E	MOUNTING D
	LOAD (%)	LOAD (%)
-20 - +40	100	100
50	100	75
60	75	50
65	63	38
70	50	25



OUTPUT DERATING VERSUS INPUT VOLTAGE

FOR ALL MOUNTINGS AND ALL MODELS

INPUT VOLTAGE (VAC)	LOAD (%)
85	80
115~265	100



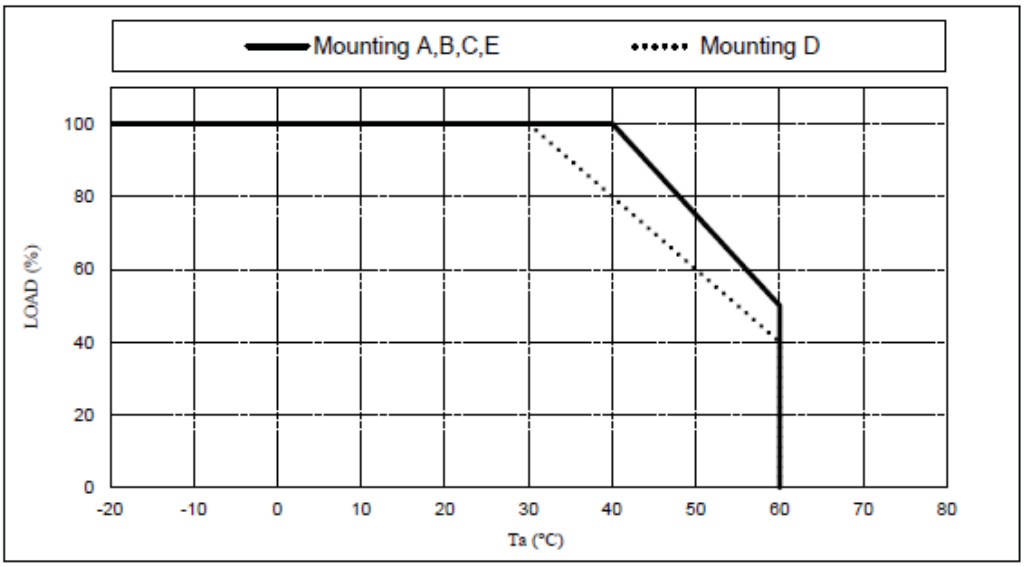
For Model CUS150M1-A

OUTPUT DERATING VERSUS OPERATING AMBIENT TEMPERATURE (Ta)

*COOLING : CONVECTION COOLING

FOR ALL MODELS

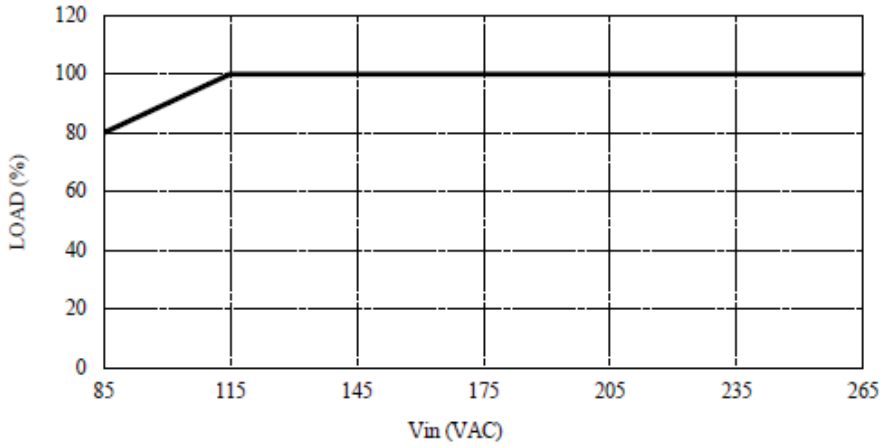
Ta (°C)	MOUNTING A,B,C,E	MOUNTING D
	LOAD (%)	LOAD (%)
-20 - +30	100	100
40	100	80
50	75	60
55	63	50
60	50	40



OUTPUT DERATING VERSUS INPUT VOLTAGE

FOR ALL MOUNTINGS AND ALL MODELS

INPUT VOLTAGE (VAC)	LOAD (%)
85	80
115~265	100



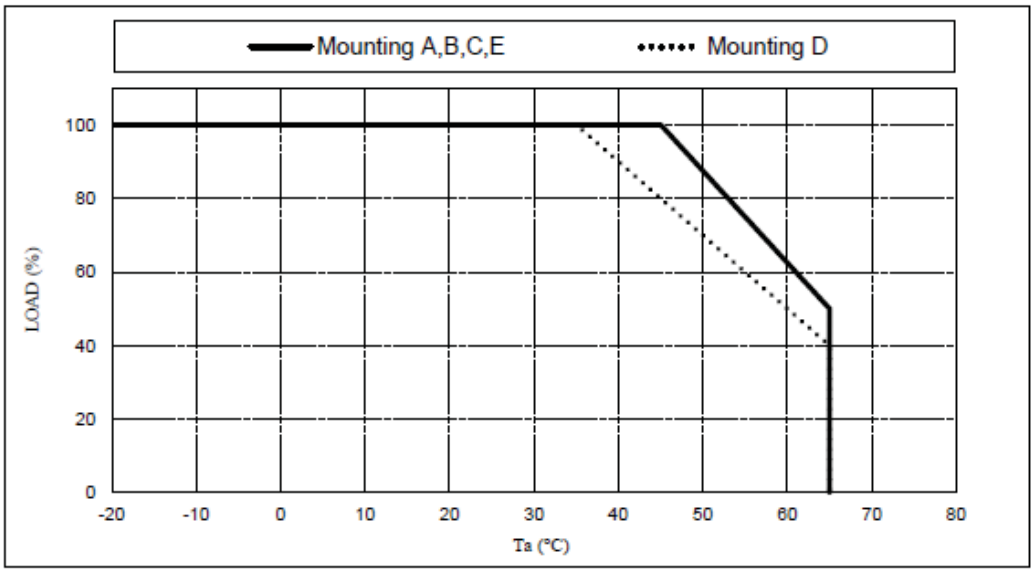
For Model CUS150M1-L

OUTPUT DERATING VERSUS OPERATING AMBIENT TEMPERATURE (Ta)

*COOLING : CONVECTION COOLING

FOR ALL MODELS

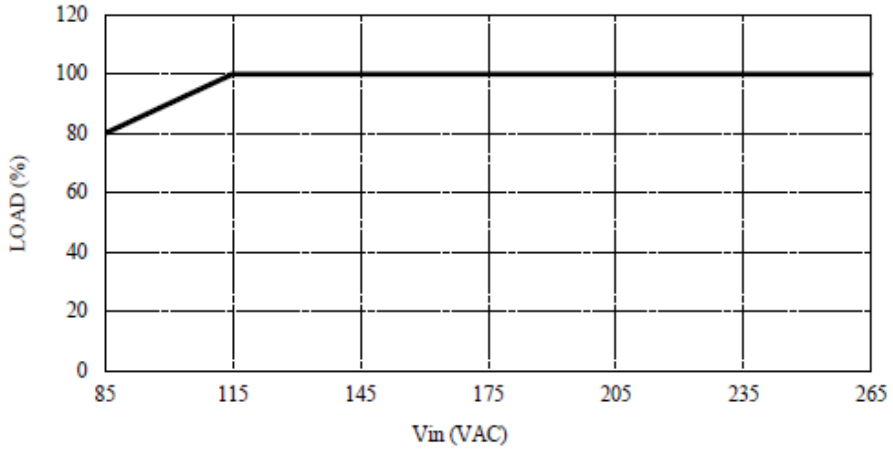
Ta (°C)	MOUNTING A,B,C,E	MOUNTING D
	LOAD (%)	LOAD (%)
-20 - +35	100	100
45	100	80
55	75	60
60	63	50
65	50	40



OUTPUT DERATING VERSUS INPUT VOLTAGE

FOR ALL MOUNTINGS AND ALL MODELS

INPUT VOLTAGE (VAC)	LOAD (%)
85	80
115~265	100



Summary of compliance with National Differences:

List of countries addressed

EU Group Differences, EU Special National Conditions, AU, CA, DK, JP, NZ, US

Explanation of used codes:

AU = Australia; CA = Canada; DK = Denmark; JP = Japan; NZ = New Zealand; US = United States of America

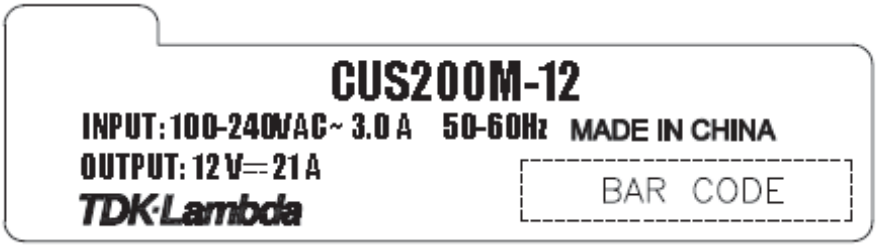
☒ **The product fulfils the requirements of**

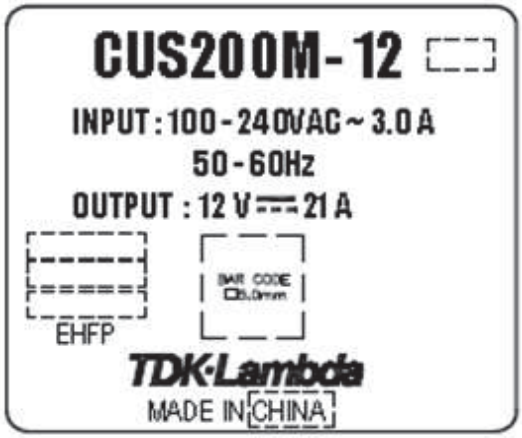
IEC 62368-1:2014 (Second Edition),
EN 62368-1:2014+A11:2017 and
CSA/UL 62368-1:2014

Copy of marking plate:

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.

<Representative>





Note: The rating labels of all models have the same design as above except for the model designation and output ratings.

TEST ITEM PARTICULARS:	
Classification of use by..... :	☒ Ordinary person ☒ Instructed person ☒ Skilled person ☐ Children likely to be present
Supply Connection ..... :	☒ AC Mains ☐ DC Mains ☐ External Circuit - not Mains connected - ☐ ES1 ☐ ES2 ☐ ES3
Supply % Tolerance ..... :	☒ +10%/-10% ☐ +20%/-15% ☐ None
Supply Connection – Type ..... :	☐ pluggable equipment type A - ☐ non-detachable supply cord ☐ appliance coupler ☐ direct plug-in ☐ mating connector ☐ pluggable equipment type B - ☐ non-detachable supply cord ☐ appliance coupler ☒ permanent connection ☐ mating connector ☒ other:Terminal block
Considered current rating of protective device as part of building or equipment installation.....:	16 A or 20 A (for US/CSA) Installation location: ☒ building; ☐ equipment
Equipment mobility.....:	☐ movable ☐ hand-held ☐ transportable ☐ stationary ☒ for building-in ☐ direct plug-in ☐ rack-mounting ☐ wall-mounted
Over voltage category (OVC) .....:	☐ OVC I ☒ OVC II ☐ OVC III ☐ OVC IV ☐ other: _____
Class of equipment .....:	☐ Class I ☐ Class II ☐ Class III ☒ Not classified
Access location .....:	☒ restricted access location ☐ N/A
Pollution degree (PD) .....:	☐ PD 1 ☒ PD 2 ☐ PD 3
Manufacturer's specified maxium operating ambient.....:	70 °C
IP protection class .....:	☒ IPX0 ☐ IP___
Power Systems .....:	☒ TN ☐ TT ☒ IT - 230 V $_{L-L}$
Altitude during operation (m) .....:	☐ 2000 m or less ☒ up to 5000 m
Altitude of test laboratory (m) .....:	☒ 2000 m or less ☐ _____ m
Mass of equipment (kg) .....:	≅0.33kg (with chassis and cover)

POSSIBLE TEST CASE VERDICTS:	
- test case does not apply to the test object .....:	N/A
- test object does meet the requirement .....:	P (Pass)
- test object does not meet the requirement .....:	F (Fail)
TESTING:	
Date of receipt of test item .....:	2015-09-25 (15081717 001) 2016-07-06 (15081717 002) N/A (15081717 003) 2018-08-08 (50138130 001) 2020-04-27 (this report)
Date (s) of performance of tests .....:	2015-09-28 to 2015-10-28 (15081717 001) 2016-09-16 to 2016-09-26 (15081717 002) 2018-08-09 (50138130 001) 2020-04-28 to 2020-05-06 (this report)
GENERAL REMARKS:	
"(See Enclosure #)" refers to additional information appended to the report. **"(See ATTACHMENT #)" refers to additional information appended to the report.** **"(See appended table)" refers to a table appended to the report.** **Throughout this report a ☐ comma / ☒ point is used as the decimal separator.**	
Manufacturer's Declaration per sub-clause 4.2.5 of IECEE 02:	
The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided .....:	☒ **Yes** ☐ **Not applicable**
When differences exist; they shall be identified in the General product information section.	
Name and address of factory (ies).....:	1. TDK-Lambda (China) Electronics Co., Ltd. No. 95, Zhujiang Road, Xinwu District, Wuxi 214028 Jiangsu, P.R. China 2. Zhangjiagang Hua Yang Electronics Co., Ltd. Zhao Feng Industrial Zone, Leyu Town Zhangjiagang, 215622 Jiangsu, P.R. China 3. Sendan Electronics Mfg. Co., Ltd. 1010 Habushin Nanto-shi, Toyama 939-1756 Japan 4. ALPS Logistics Facilities Co., Ltd. 593-1 Nishi-Ohashi, Tsukuba-shi, Ibaraki, 305-0831 Japan 5. TDK-Lambda Corp. Nagaoka Technical Center 2704-1 Settaya-machi, Nagaoka-shi, Niigata 940-1195 Japan

GENERAL PRODUCT INFORMATION:

General product information:

The EUT is a component type switching mode power supplies intended for the class I construction of information technology equipment.

Use single PCB layout (ZCCB166) for all models. All models are identical, except of the optional chassis, cover, turns of Transformer and the rating of some components which results in different output ratings.

Schematic and PCB layout for models CUS150M1 & CME150A are identical to models CUS200M & CME200A except for output power and some components rating.

Model CME150A-zxxxxxxx is identical to model CUS150M1-zxxxxxxx except for model name.
See Model List below for details.

Model differences:

Series Model	I/p voltage (Vac)	Freq (Hz)	I/p current (A)	Minimal output	Rated output (typical)	Maximum output
Convection cooling condition						
CUS200M-12xxxxxxx CME200A-12xxxxxxx	100-240	50-60	3.0	11.4Vdc	12Vdc	12.6Vdc
				16.7A	16.7A	15.9A
CUS200M-18xxxxxxx CME200A-18xxxxxxx	100-240	50-60	3.0	17.1Vdc	18Vdc	19.8Vdc
				11.2A	11.2A	10.2A
CUS200M-24xxxxxxx CME200A-24xxxxxxx	100-240	50-60	3.0	22.8Vdc	24Vdc	26.4Vdc
				8.4A	8.4A	7.6A
CUS200M-36xxxxxxx CME200A-36xxxxxxx	100-240	50-60	3.0	34.2Vdc	36Vdc	39.6Vdc
				5.57A	5.57A	5.06A
CUS200M-48xxxxxxx CME200A-48xxxxxxx	100-240	50-60	3.0	45.6Vdc	48Vdc	52.8Vdc
				4.2A	4.2A	3.8A
CUS150M1-12xxxxxxx CME150A-12xxxxxxx	100-240	50-60	1.8	11.4Vdc	12Vdc	12.6Vdc
				12.5A	12.5A	11.9A
CUS150M1-18xxxxxxx CME150A-18xxxxxxx	100-240	50-60	1.8	17.1Vdc	18Vdc	19.8Vdc
				8.4A	8.4A	7.6A
CUS150M1-24xxxxxxx CME150A-24xxxxxxx	100-240	50-60	1.8	22.8Vdc	24Vdc	26.4Vdc
				6.3A	6.3A	5.7A
CUS150M1-36xxxxxxx CME150A-36xxxxxxx	100-240	50-60	1.8	34.2Vdc	36Vdc	39.6Vdc
				4.2A	4.2A	3.8A
CUS150M1-48xxxxxxx CME150A-48xxxxxxx	100-240	50-60	1.8	45.6Vdc	48Vdc	52.8Vdc
				3.2A	3.2A	2.9A
Forced air cooling condition(airflow: air velocity 1.5m/s)						
CUS200M-12xxxxxxx CME200A-12xxxxxxx	100-240	50-60	3.0	11.4Vdc	12Vdc	12.6Vdc
				21A	21A	20A
CUS200M-18xxxxxxx CME200A-18xxxxxxx	100-240	50-60	3.0	17.1Vdc	18Vdc	19.8Vdc
				14A	14A	12.7A
CUS200M-24xxxxxxx CME200A-24xxxxxxx	100-240	50-60	3.0	22.8Vdc	24Vdc	26.4Vdc
				10.5A	10.5A	9.5A
CUS200M-36xxxxxxx	100-240	50-60	3.0	34.2Vdc	36Vdc	39.6Vdc

CME200A-36xxxxxxx				7A	7A	6.4A
CUS200M-48xxxxxxx CME200A-48xxxxxxx	100-240	50-60	3.0	45.6Vdc	48Vdc	52.8Vdc
				5.3A	5.3A	4.8A

Additional Information:

- The product is a component type switching power supply, the overall compliance shall be investigated in the complete end system/equipment, in particular as:
  - Fire enclosure
  - Mechanical enclosure
  - Electrical enclosure
- Some components are **pre-certified**, which have been evaluated according to the relevant requirements of IEC 62368-1, are employed in this product. Their suitability of use has been checked according to clauses 4.1.1 and 4.1.2.
- The product is to be operated up to 5000 m above sea level, the minimum clearances were multiplied by the factor given in Table A.2 of IEC 60664-1: 1.48.
- The label is draft of artwork for marking plates pending approval by National Certification Bodies and it shall not be affixed to products prior to such an approval.

Markings and Instructions

- The installation instruction contains instructions for connection to an IT power distribution system.
- Fuse Identification: F1/F1 or F1A/F1B : T5A 250Vac

The product also marked with:

CAUTION: FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE AND RATING OF FUSE.

Definition of variable(s):

CUS200M-zxxxxxxx; CME200A-zxxxxxxx; CUS150M1-zxxxxxxx; CME150A-zxxxxxxx
(z = 12, 18, 24, 36 or 48; xxxxxxx = T, M, MR, R, J, JR, L, A, CO2, S1, other alphanumeric character, symbol or blank)

Note: Suffix options would be used shown below or used together.

Variable:	Range of variable:	Content:
z	12, 18, 24, 36 or 48	Denotes for different output voltage
xxxxxxx	T	Denotes for Terminal block connector
	M	Denotes for Molex connector
	MR	Denotes for Molex connector in reverse direction
	R	Denotes for JST connector or TE connectivity Connector in reverse direction
	J	Denotes for JST connector
	JR	Denotes for JST connector in reverse direction
	L	Denotes for chassis
	A	Denotes for cover & chassis
	CO2	Denotes PWB coating
	S1	Denotes for two pins input connector & FG Tap
	other alphanumeric character, symbol	For market purposes, no construction differences and no safety impact.
	blank	Denotes for JST connector or TE connectivity Connector

Additional application considerations – (Considerations used to test a component or sub-assembly) –

The equipment is a component intended for incorporation in IT equipment, the overall compliance shall be investigated in the complete end system.

The power supply cord set was not evaluated together with the equipment. The suitable certified power supply cord set has to be provided in the country where the equipment is sold.

ENERGY SOURCE IDENTIFICATION AND CLASSIFICATION TABLE:	
(Note 1: Identify the following six (6) energy source forms based on the origin of the energy.) (Note 2: The identified classification e.g., ES2, TS1, should be with respect to its ability to cause pain or injury on the body or its ability to ignite a combustible material. Any energy source can be declared Class 3 as a worse case classification e.g. PS3, ES3.	
Electrically-caused injury (Clause 5): (Note: Identify type of source, list sub-assembly or circuit designation and corresponding energy source classification) Example: +5 V dc input ES1	
Source of electrical energy	**Corresponding classification (ES)**
Primary circuits	ES3
DC output terminal	ES1
Electrically-caused fire (Clause 6): (Note: List sub-assembly or circuit designation and corresponding energy source classification) Example: Battery pack (maximum 85 watts): PS2	
Source of power or PIS	**Corresponding classification (PS)**
Primary circuits	PS3
DC output	PS3
Injury caused by hazardous substances (Clause 7) (Note: Specify hazardous chemicals, whether produces ozone or other chemical construction not addressed as part of the component evaluation.) Example: Liquid in filled component Glycol	
Source of hazardous substances	**Corresponding chemical**
N/A	N/A
Mechanically-caused injury (Clause 8) (Note: List moving part(s), fan, special installations, etc. & corresponding MS classification based on Table 35.) Example: Wall mount unit MS2	
Source of kinetic/mechanical energy	**Corresponding classification (MS)**
Sharp edges and corners	MS1
Equipment mass – mass < 7 kg	MS1
Thermal burn injury (Clause 9) (Note: Identify the surface or support, and corresponding energy source classification based on type of part, location, operating temperature and contact time in Table 38.) Example: Hand-held scanner – thermoplastic enclosure TS1	
Source of thermal energy	**Corresponding classification (TS)**
Metal chassis	The evaluation shall be made during the final system approval
Radiation (Clause 10) (Note: List the types of radiation present in the product and the corresponding energy source classification.) Example: DVD – Class 1 Laser Product RS1	
Type of radiation	**Corresponding classification (RS)**
N/A	N/A

ENERGY SOURCE DIAGRAM
Indicate which energy sources are included in the energy source diagram. Insert diagram below
See “ENERGY SOURCE IDENTIFICATION AND CLASSIFICATION TABLE” ☒ **ES** ☒ **PS** ☒ **MS** ☐ **TS** ☐ **RS**

OVERVIEW OF EMPLOYED SAFEGUARDS				
Clause	**Possible Hazard**			
5.1	Electrically-caused injury			
Body Part (e.g. Ordinary)	Energy Source (ES3: Primary Filter circuit)	Safeguards		
		Basic	Supplementary	Reinforced
Ordinary (output circuit assumed to be accessible by ordinary person in end product)	ES3: Primary circuits	--	--	Isolating Transformers Optocouplers Bridging Y-capacitor
Ordinary (metal chassis assumed to be direct or indirect accessible by ordinary person in end product)	ES3: Primary circuits	Certified Y-Capacitor	Protectively bonding chassis	N/A
Ordinary	ES1: Output	N/A	N/A	N/A
6.1	Electrically-caused fire			
Material part (e.g. mouse enclosure)	Energy Source (PS2: 100 Watt circuit)	Safeguards		
		Basic	Supplementary	Reinforced
Combustible materials	PS3: > 100 Watt circuit (Primary circuits and Secondary circuits)	Equipment safeguards (no ignition occurs and no such temp. attained specified in 6.3.1 a)	Equipment safeguards (e.g. rated V-0 PCB, combustible material rated V-2 min., metal fire barrier or enclosure; see 6.4.5 and 6.4.6)	N/A
7.1	Injury caused by hazardous substances			
Body Part (e.g., skilled)	Energy Source (hazardous material)	Safeguards		
		Basic	Supplementary	Reinforced
N/A	N/A	N/A	N/A	N/A
8.1	Mechanically-caused injury			
Body Part (e.g. Ordinary)	Energy Source (MS3:High Pressure Lamp)	Safeguards		
		Basic	Supplementary	Reinforced
Ordinary	MS1: Sharp edge and corners	Rounded edge and corners	N/A	N/A
Ordinary	MS1: Equipment mass – mass < 7 kg	≅0.33kg	N/A	N/A
9.1	Thermal Burn			
Body Part (e.g., Ordinary)	Energy Source (TS2)	Safeguards		
		Basic	Supplementary	Reinforced
N/A	N/A	N/A	N/A	N/A
10.1	Radiation			
Body Part	Energy Source	Safeguards		

(e.g., Ordinary)	(Output from audio port)	Basic	Supplementary	Reinforced
N/A	N/A	N/A	N/A	N/A
Supplementary Information: (1) See attached energy source diagram for additional details. (2) “N” – Normal Condition; “A” – Abnormal Condition; “S” Single Fault				